

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	(analytical near2 report) same (multidimensional near3 data near3 model\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/11/23 09:10
L2	5	(analytical near2 report) and (multidimensional near3 data near3 model\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/11/23 09:11
L3	12	(analytical near2 report) and (multidimensional near3 database)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/11/23 09:11



Welcome United States Patent and Trademark Office

☐ Search Results

BROWSE

SEARCH

IEEE XPLORE GUIDE

SUPPORT

Results for "((modeling and multidimensional and database and cubes)<in>metadata)"

Your search matched 15 of 1263585 documents.

A maximum of 100 results are displayed, 25 to a page, sorted by **Relevance** in **Descending** order.

e-mail
 printer friendly

» Search Options

[View Session History](#)[New Search](#)

Modify Search


☐ Check to search only within this results set

 Display Format:
 ☒ Citation
 ☐ Citation & Abstract

» Key

IEEE JNL	IEEE Journal or Magazine
IEE JNL	IEE Journal or Magazine
IEEE CNF	IEEE Conference Proceeding
IEE CNF	IEE Conference Proceeding
IEEE STD	IEEE Standard

Select Article Information

- ☒
1. Modeling multidimensional databases, cubes and cube operations
 Vassiliadis, P.;
 Scientific and Statistical Database Management, 1998. Proceedings. Tenth International Conference on 1-3 July 1998 Page(s):53 - 62
 Digital Object Identifier 10.1109/SSDM.1998.688111
[AbstractPlus](#) | Full Text: [PDF](#)(224 KB) IEEE CNF
- ☐
2. Normal forms for multidimensional databases
 Lehner, W.; Albrecht, J.; Wedekind, H.;
 Scientific and Statistical Database Management, 1998. Proceedings. Tenth International Conference on 1-3 July 1998 Page(s):63 - 72
 Digital Object Identifier 10.1109/SSDM.1998.688112
[AbstractPlus](#) | Full Text: [PDF](#)(60 KB) IEEE CNF
- ☐
3. High Performance Multidimensional Analysis and Data Mining
 Goil, S.; Choudhary, A.;
 Supercomputing, 1998. SC98. IEEE/ACM Conference on 07-13 Nov. 1998 Page(s):21 - 21
 Digital Object Identifier 10.1109/SC.1998.10043
[AbstractPlus](#) | Full Text: [PDF](#)(152 KB) IEEE CNF
- ☐
4. Multidimensional database technology
 Pedersen, T.B.; Jensen, C.S.;
 Computer
 Volume 34, Issue 12, Dec. 2001 Page(s):40 - 46
 Digital Object Identifier 10.1109/2.970558
[AbstractPlus](#) | [References](#) | Full Text: [PDF](#)(362 KB) IEEE JNL
- ☐
5. A parallel scalable infrastructure for OLAP and data mining
 Goil, S.; Choudhary, A.;
 Database Engineering and Applications, 1999. IDEAS '99. International Symposium Proceedings 2-4 Aug. 1999 Page(s):178 - 186
 Digital Object Identifier 10.1109/IDEAS.1999.787266
[AbstractPlus](#) | Full Text: [PDF](#)(192 KB) IEEE CNF
- ☐
6. Answering multidimensional queries on cubes using other cubes
 Theodoratos, D.; Sellis, T.;
 Scientific and Statistical Database Management, 2000. Proceedings. 12th International Conference on 26-28 July 2000 Page(s):109 - 122
 Digital Object Identifier 10.1109/SSDM.2000.869782
[AbstractPlus](#) | Full Text: [PDF](#)(408 KB) IEEE CNF

7. **Maintaining data cubes under dimension updates**
Hurtado, C.A.; Mendelzon, A.O.; Vaisman, A.A.;
Data Engineering, 1999. Proceedings., 15th International Conference on
23-26 March 1999 Page(s):346 - 355
Digital Object Identifier 10.1109/ICDE.1999.754950
[AbstractPlus](#) | Full Text: [PDF](#)(304 KB) IEEE CNF
8. **An object-centered multi-dimensional data model with hierarchically structured dimensions**
Hacid, M.-S.; Sattler, U.;
Knowledge and Data Engineering Exchange Workshop, 1997. Proceedings
4 Nov. 1997 Page(s):65 - 72
Digital Object Identifier 10.1109/KDEX.1997.629835
[AbstractPlus](#) | Full Text: [PDF](#)(716 KB) IEEE CNF
9. **Interactive ROLAP on large datasets: a case study with UB-trees**
Ramsak, F.; Markl, V.; Fenk, R.; Bayer, R.; Ruf, T.;
Database Engineering & Applications, 2001 International Symposium on.
16-18 July 2001 Page(s):167 - 176
Digital Object Identifier 10.1109/IDEAS.2001.938083
[AbstractPlus](#) | Full Text: [PDF](#)(792 KB) IEEE CNF
10. **Computing cube view dependences in OLAP datacubes**
Hurtado, C.; Gutierrez, C.;
Conference on Scientific and Statistical Database Management, 2003. 15th International
9-11 July 2003 Page(s):33 - 42
Digital Object Identifier 10.1109/SSDM.2003.1214950
[AbstractPlus](#) | Full Text: [PDF](#)(377 KB) IEEE CNF
11. **Data warehousing within intranet: prototype of a web-based executive information system**
Kurz, A.; Min Tjoa, A.;
Database and Expert Systems Applications, 1997. Proceedings., Eighth International Workshop on
1-2 Sept. 1997 Page(s):627 - 632
Digital Object Identifier 10.1109/DEXA.1997.617387
[AbstractPlus](#) | Full Text: [PDF](#)(612 KB) IEEE CNF
12. **Securing OLAP data cubes against privacy breaches**
Lingyu Wang; Jajodia, S.; Wijesekera, D.;
Security and Privacy, 2004. Proceedings. 2004 IEEE Symposium on
9-12 May 2004 Page(s):161 - 175
Digital Object Identifier 10.1109/SECPRI.2004.1301322
[AbstractPlus](#) | Full Text: [PDF](#)(1520 KB) IEEE CNF
13. **Tools for data warehouse quality**
Gebhardt, M.; Jarke, M.; Jeusfeld, M.A.; Quix, C.; Sklorz, S.;
Scientific and Statistical Database Management, 1998. Proceedings. Tenth International Conference on
1-3 July 1998 Page(s):229 - 232
Digital Object Identifier 10.1109/SSDM.1998.688130
[AbstractPlus](#) | Full Text: [PDF](#)(312 KB) IEEE CNF
14. **Visual interactive 3-dimensional clustering with implicit functions**
Sourina, O.; Liu, D.;
Cybernetics and Intelligent Systems, 2004 IEEE Conference on
Volume 1, 1-3 Dec. 2004 Page(s):382 - 386 vol. 1
[AbstractPlus](#) | Full Text: [PDF](#)(417 KB) IEEE CNF
15. **Mining evolving customer-product relationships in multi-dimensional space**
Li, X.; Han, J.; Yin, X.; Xin, D.;
Data Engineering, 2005. ICDE 2005. Proceedings. 21st International Conference on
5-8 April 2005 Page(s):580 - 581
Digital Object Identifier 10.1109/ICDE.2005.88
[AbstractPlus](#) | Full Text: [PDF](#)(91 KB) IEEE CNF


[Subscribe \(Full Service\)](#) [Register \(Limited Service, Free\)](#) [Login](#)

 Search: ☐ The ACM Digital Library ☒ The Guide

SEARCH

THE GUIDE TO COMPUTING LITERATURE

 Feedback [Report a problem](#) [Satisfaction survey](#)

Modeling Multidimensional Databases, Cubes and Cube Operations

 Full text [Publisher Site](#)

 Source **SSDBM** archive
Proceedings of the 10th International Conference on Scientific and Statistical Database Management [table of contents](#)
 Pages: 53 - 62
 Year of Publication: 1998
 ISBN:0-8186-8575-1

 Author [Panos Vassiliadis](#)

Publisher IEEE Computer Society Washington, DC, USA

 Additional Information: [abstract](#) [citations](#) [index terms](#) [collaborative colleagues](#)

 Tools and Actions: [Discussions](#) [Find similar Articles](#) [Review this Article](#)
[Save this Article to a Binder](#) Display Formats: [BibTex](#) [EndNote](#) [ACM Ref](#)

↑ ABSTRACT

On-Line Analytical Processing (OLAP) is a trend in database technology, which was recently introduced and has attracted the interest of a lot of research work. OLAP is based on the multidimensional view of data, supported either by multidimensional databases (MOLAP) or relational engines (ROLAP). In this paper we propose a model for multidimensional databases. Dimensions, dimension hierarchies and cubes are formally introduced. We also introduce cube operations (changing of levels in the dimension hierarchy, function application, navigation etc.). The approach is based on the notion of the base cube, which is used for the calculation of the results of cube operations. We focus our approach on the support of series of operations on cubes (i.e. the preservation of the results of previous operations and the applicability of aggregate functions in a series of operations). Furthermore, we provide a mapping of the multidimensional model to the relational model and to multidimensional arrays.

↑ CITINGS 11

[M. Jarke , C. Quix , D. Calvanese , M. Lenzerini , E. Franconi , S. Ligoudistianos , P. Vassiliadis , Y. Vassiliou, Concept based design of data warehouses: the DWQ demonstrators, ACM SIGMOD Record, v.29 n.2, p.591, June 2000](#)

[Matteo Golfarelli , Stefano Rizzi , Boris Vrdoljak, Data warehouse design from XML sources, Proceedings of the 4th ACM international workshop on Data warehousing and OLAP, p.40-47, November 09-09, 2001, Atlanta, Georgia, USA](#)

[Juan Trujillo , Manuel Palomar , Jaime Gómez, The GOLD definition language \(GDL\): an object oriented formal specification language for multidimensional databases, Proceedings of the 2000 ACM symposium on Applied computing, p.346-350, March 2000, Como, Italy](#)

[Juan Trujillo , Manuel Palomar , Jaime Gómez, Detecting patterns and OLAP operations in the GOLD model, Proceedings of the 2nd ACM international workshop on Data warehousing and OLAP, p.48-53, November 02-06, 1999, Kansas City, Missouri, United States](#)

Alberto Abelló , José Samos , Fèlix Saltor, Understanding facts in a multidimensional object-oriented model, Proceedings of the 4th ACM international workshop on Data warehousing and OLAP, p.32-39, November 09-09, 2001, Atlanta, Georgia, USA

Dennis Pedersen , Karsten Riis , Torben Bach Pedersen, A powerful and SQL-compatible data model and query language for OLAP, Australian Computer Science Communications, v.24 n.2, p.121-130, January-February 2002

Nguyen Thanh Binh , A. Min Tjoa, Conceptual multidimensional data model based on object-oriented metacube, Proceedings of the 2001 ACM symposium on Applied computing, p.295-300, March 2001, Las Vegas, Nevada, United States

Alberto Abelló , José Samos , Fèlix Saltor, Implementing operations to navigate semantic star schemas, Proceedings of the 6th ACM international workshop on Data warehousing and OLAP, November 07-07, 2003, New Orleans, Louisiana, USA

Timo Niemi , Lasse Hirvonen , Kalervo Järvelin, Multidimensional data model and query language for informetrics, Journal of the American Society for Information Science and Technology, v.54 n.10, p.939-951, August 2003

Riccardo Torlone, Conceptual multidimensional models, Multidimensional databases: problems and solutions, Idea Group Publishing, Hershey, PA, 2003

Maurizio Rafanelli, Preface, Multidimensional databases: problems and solutions, Idea Group Publishing, Hershey, PA, 2003

↑ INDEX TERMS

Keywords:

OLAP, Multidimensional Databases

↑ Collaborative Colleagues:

<u>Panos Vassiliadis:</u>	<u>Mokrane Bouzeghoub</u>	<u>Evaggelia Pitoura</u>	<u>Yannis Vassiliou</u>
	<u>Matthias Jarke</u>	<u>Christoph Quix</u>	
	<u>Manfred Jeusfeld</u>	<u>Timos Sellis</u>	
	<u>Manfred A. Jeusfeld</u>	<u>Alkis Simitsis</u>	
	<u>Alexandros Karakasidis</u>	<u>Spiros Skiadopoulos</u>	
	<u>Nikos Karayannidis</u>	<u>Martin Staudt</u>	
	<u>Hans J. Lenz</u>	<u>Yannis Theodoridis</u>	
	<u>M. Lenzerini</u>	<u>Zografoula Vagena</u>	
	<u>Maurizio Lenzerini</u>	<u>P. Vassiliadis</u>	
	<u>Andreas S. Maniatis</u>	<u>Y. Vassiliou</u>	

The ACM Portal is published by the Association for Computing Machinery. Copyright © 2005 ACM, Inc.
[Terms of Usage](#) [Privacy Policy](#) [Code of Ethics](#) [Contact Us](#)

Useful downloads:  [Adobe Acrobat](#)  [QuickTime](#)  [Windows Media Player](#)  [Real Player](#)